CBO PAPERS

REGULATORY IMPACT ANALYSIS: COSTS AT SELECTED AGENCIES AND IMPLICATIONS FOR THE LEGISLATIVE PROCESS

March 1997

CONGRESSIONAL BUDGET OFFICE

CBO PAPERS

REGULATORY IMPACT ANALYSIS: COSTS AT SELECTED AGENCIES AND IMPLICATIONS FOR THE LEGISLATIVE PROCESS

March 1997

CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

NOTE

Unless otherwise indicated, all dollar amounts in this paper are expressed in 1995 values.

PREFACE

Under President Clinton's Executive Order 12866 and the Unfunded Mandates Reform Act of 1995, federal agencies are required to analyze the costs, benefits, and other effects of proposed regulations. In many cases, those regulatory impact analyses (RIAs) cost agencies significant time, money, and staff effort. Recent proposals to extend such analysis to the legislative process could impose similar analytic and reporting requirements on Congressional committees, the Congressional Budget Office (CBO), and other support agencies of the legislative branch.

This CBO paper—prepared at the request of the House Committee on Commerce—examines the personnel, contracting, and other costs associated with recent RIAs, as well as the time required to prepare them. It focuses on a sample of federal agencies whose regulations have some of the largest impacts on the U.S. economy. The paper also looks at the implications of extending such analytic requirements to the legislative process. In keeping with CBO's mandate to provide objective, impartial analysis, the paper makes no recommendations.

Barbara Johnson, formerly of CBO's Natural Resources and Commerce Division, prepared the paper under the supervision of Jan Paul Acton. Carl Muehlmann wrote Appendix B and provided statistical support. The authors are grateful for the cooperation and comments of various federal employees who prepare RIAs, including Bret Snyder, Neil Patel, Carl Kessler, Ron Evans, Gary Ballord, Barnes Johnson, Lyn Luben, Sue Stendebach, Janice Wagner, and Judy Lebowich of the Environmental Protection Agency; Paul Larson of the Federal Aviation Administration; Bob Shelton and Jim Simmons of the National Highway Traffic Safety Administration; and agency staff at the Coast Guard and the Occupational Safety and Health Administration. In addition, Perry Beider, Jim Blum, Kim Cawley, Arlene Holen, Elliot Schwartz, and Bruce Vavrichek of CBO provided helpful comments on earlier drafts of the paper. (Despite the help of those individuals, responsibility for the final content rests solely with the authors.)

Sherry Snyder and Christian Spoor edited the paper, and Marlies Dunson provided editorial assistance. Angela McCollough prepared it for publication.

June E. O'Neill
Director

March 1997

CONTENTS

TABLES

FIGURES

SUMMARY

Recent proposals for regulatory reform would subject the regulations that federal agencies issue to increased cost-benefit analysis. Various laws and executive orders already require such analyses (known as regulatory impact analyses, or RIAs) for any "significant" rule—defined as one that would cost more than $100 million a year or have adverse effects on the U.S. economy or the federal budget. Some recent legislative proposals would also have the Congressional Budget Office (CBO) or other Congressional support agencies perform similar work.

Many studies have explored whether the benefits of regulation justify its costs, but few have examined the nature and level of resources necessary for the government to conduct cost-benefit analyses. CBO has tried to fill that gap by studying the costs of 85 RIAs from six offices in four agencies: the Environmental Protection Agency (EPA), the Coast Guard, the Federal Aviation Administration (FAA), and the National Highway Traffic Safety Administration. CBO chose those agencies because they are frequently cited as imposing significant regulatory costs on the economy.

CBO also examined cost data on regulatory analyses from the Occupational Safety and Health Administration, but OSHA was unable to distinguish RIAs from other analyses. Thus, OSHA's analyses are not included in the final RIA count, but

some of its cost information is presented for purposes of comparison. Examining other regulatory agencies, such as the Food and Drug Administration and the Department of Agriculture, would also have been instructive, but CBO was unable to do so because of time limitations.

The majority of the RIAs in CBO's study date from 1990 through 1996, although some of the analyses are still going on, and five were published before 1990. (The FAA submitted some RIA data from 1988 and 1989.) CBO reviewed that seven-year period to capture the most recent analyses and to account for the fact that RIAs can take years to complete.

Based on the sample of 85 analyses, the average cost per RIA was about $570,000, with a range of $14,000 to more than $6 million per analysis. The median cost (the value below which half of the costs per RIA are found) was $270,000, indicating that a few relatively expensive analyses were skewing the average upward. When the four RIAs that cost more than $2 million were excluded, the average and median costs were about $390,000 and $270,000, respectively. (All values are stated in 1995 dollars.)

The RIAs in CBO's study also varied considerably in the amount of time they took to complete, with an average of three years and a range of six weeks to more than 12 years. For agencies that use outside contractors (all EPA offices and the

Coast Guard), in-house personnel costs—salary, fringe benefits, and estimated overhead—accounted for about one-third of all RIA costs; spending on outside contractors accounted for the remaining two-thirds.

Although CBO's study represents a best attempt to collect and verify original data from a sample of agencies that conduct RIAs, it leaves many questions unanswered. The most difficult is why the costs of analyses vary so much, both among agencies and within them. CBO identified several possible reasons based on anecdotal evidence from agency staff. A thorough exploration would require investigating the history of each rule, which was beyond the scope of CBO's review.

Despite those limitations, the Congressional Budget Office identified several features of regulatory impact analyses and similar analytic efforts by federal agencies:

- There Is No Such Thing as a Typical RIA. The cost of the analyses and the time needed to complete them varied tremendously in CBO's survey. Anecdotal evidence suggests several reasons for that variability, including the scope and complexity of the rule being analyzed, the nature of the information required to perform the RIA, and the degree of political consensus surrounding the rule. The costs and time needed to perform similar regulatory analysis in the future will probably also vary—both at executive agencies and at CBO or other parts of the legislative branch that might be required to undertake similar analysis.

- Agencies Do Not Track Costs Separately for Each RIA. Although agencies employ both government personnel and outside contractors to perform RIAs, none of the agencies that CBO reviewed keep track of the total contract and personnel costs incurred for each regulatory impact analysis. In addition, estimates of the time that government personnel spend on RIAs are imprecise because agencies do not keep time sheets by activity. Estimates of contractor costs are more reliable because they can be traced through billing records. However, even contractor costs can be hard to allocate if one contract includes work on several RIAs. As a result, accurately projecting the costs that another office might experience in undertaking regulatory analysis is difficult because the components of the baseline costs are not well documented.

- Reported RIA Costs Do Not Reflect the Cost of Some Supporting Analysis. Agencies routinely perform economic analysis on proposed rules. Some of that analysis is included in the RIA and some is not, but even analysis excluded from the final document plays a role in the decisionmaking process. Moreover, agencies often need to perform other types of analysis—such as risk analyses or engineering studies —to determine the costs and benefits of a regulation. Although those studies are necessary precursors to the RIA, they are not included in the costs attributed to preparing it. By excluding the costs of those studies, the agencies in CBO's survey may underestimate the costs of performing regulatory impact analyses. Other agencies—including CBO—would therefore probably need to establish some added analytic infrastructure to support a regular program of regulatory analysis.

- Determining What Constitutes an RIA Is Difficult. Although the term "regulatory impact analysis" usually signifies a cost-benefit analysis performed for a significant rule, other working definitions exist. Some officials define an RIA as any analysis that considers benefits as well as costs, or that considers alternatives as well as the preferred option, even if it is not for a significant rule. Also, some RIAs are never published because the rules they are associated with are never finished and put into effect. Consequently, although much work has gone into the analysis, the RIA will never show up on any list of published analyses. Given all of those difficulties, it can be hard to define and isolate the universe of RIAs. That problem will be compounded if such analysis is moved to the legislative stage, because the form the potential regulations might take and whether they will be significant or minor are generally even more uncertain at that point.

In sum, regulatory impact analyses generally require a considerable amount of resources and time. Conducting comparable analysis within the current legislative process would be difficult even if sufficient resources were made available. The Congress has the ability to consider and vote on a bill the same day the bill is reported by a committee if it chooses to do so, and normal rules permit a bill to be considered in as few as three days. By contrast, even the quickest analysis in CBO's review took six weeks. Furthermore, the average duration per analysis—three years—is longer than the two-year session of Congress between national elections.

CHAPTER I

INTRODUCTION

Various laws and executive orders require federal agencies to analyze the potential costs and benefits of regulations they issue. Such cost-benefit studies are known as regulatory impact analyses (RIAs) or economic analyses and are required for all "significant" agency rules.[1] According to President Clinton's Executive Order 12866, published in 1993, a regulation is significant if it:

- Has an annual cost to the U.S. economy of more than $100 million;

- Has an adverse effect on the economy, productivity, jobs, or the environment;

- Creates inconsistencies with other agency actions;

- Affects the budgetary impact of entitlement programs, user fees, or loan programs; or

1. Executive Order 12866, signed by President Clinton, replaced the term "regulatory impact analysis" with "economic analysis," although many participants in the process continue to use the former term. Because the Congressional Budget Office's study covers a period before that change in designation and because most of the respondents refer to RIAs in their discussions, this paper refers to all such analyses as regulatory impact analyses. See Executive Order 12866, "Regulatory Planning and Review," *Federal Register*, vol. 50 (October 4, 1993), p. 51735 ff.

- Raises new legal or policy issues arising from the President's priorities.

The Congress formalized key provisions of that executive order in title II of the Unfunded Mandates Reform Act, enacted in March 1995. (See Appendix A for a history of executive orders establishing RIAs and Appendix B for a description of the steps that an agency such as the Environmental Protection Agency typically follows in preparing proposed and final rules.)

Several studies have examined the quality and consistency of federal RIAs, but few have looked at the cost of performing them. Such information is becoming essential, however, because recent attention in the Congress and elsewhere on regulatory reform has raised the profile of cost-benefit issues. Moreover, two recent federal laws and several bills in the previous Congress would require some agencies, including the Congressional Budget Office (CBO), to prepare more cost-benefit analyses or give more weight to cost-benefit issues in their decisionmaking. Without a better understanding of how many analyses are conducted now and what they cost, predicting the costs and time needed to comply with the new proposals is impossible. The proposed laws do not require studies that are identical to RIAs—in some cases they require analysis at a very different point in the rulemaking process—but current regulatory impact analyses performed by agencies and reviewed by the Office of Management and Budget (OMB) are the closest available approximation to the analysis that those bills would require. Thus, RIAs provide a benchmark to help gauge the added workload of such legislation.

REGULATORY-REFORM LAWS AND BILLS

Recent laws to reform the regulatory process, driven by concerns about the growth of federal regulation, have included an increased role for cost-benefit analysis.[2] The Unfunded Mandates Reform Act requires agencies to choose the least costly, most cost-effective, or least burdensome alternative to a rule. The Small Business Regulatory Enforcement Fairness Act, enacted in March 1996, requires the General Accounting Office (GAO) to review cost-benefit analyses and send its reviews to relevant Congressional committees.

At least seven bills in the 104th Congress included cost-benefit provisions. Those bills were the Job Creation and Wage Enhancement Act of 1995 (H.R. 9), the Regulatory Transition Act of 1995 (H.R. 450), the Regulatory Reform and Relief Act (H.R. 926), the Regulatory Sunset and Review Act of 1995 (H.R. 994), the Risk Assessment and Cost Benefits Act of 1995 (H.R. 1022), the Regulatory Reform Act of 1995 (S. 291), and the Comprehensive Regulatory Reform Act of 1995 (S. 343).

2. All information on recent laws and proposed bills comes from Rogelio Garcia, *Federal Regulatory Reform: An Overview*, CRS Issue Brief IB95035 (Congressional Research Service, April 30, 1996).

Those bills would require agencies to perform more cost-benefit analyses or to include cost-benefit concerns in their regulatory reviews.

Another legislative proposal, the Regulatory Accountability Act (H.R. 3277), would require the Congressional Budget Office to estimate the costs—including social, environmental, and economic costs—likely to result directly or indirectly from a regulation or its alternative. That proposal would significantly expand CBO's activities.

PREVIOUS STUDIES OF THE COST OF COST-BENEFIT ANALYSIS

Although many studies have examined the costs and benefits of regulation as well as the quality and consistency of RIAs, only a few have reviewed the resources that are necessary to conduct cost-benefit analyses.[3] The five most relevant studies report a wide range of costs for RIAs.

A 1982 report by GAO examined the costs of 38 analyses conducted before 1981 by eight executive branch agencies, including the Environmental Protection

3. For example, the statement of Professor Thomas J. Hopkins, University of Rochester, before the Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs of the House Committee on Government Reform and Oversight on May 16, 1996, discusses the costs and benefits of regulatory analysis. Robert W. Hahn discusses the information contained in RIAs in "Regulatory Reform: What Do the Government's Numbers Tell Us?" in Hahn, ed., *Risks, Costs, and Lives Saved: Getting Better Results from Regulation* (New York: Oxford University Press and AEI Press, 1996).

Agency (EPA), the National Highway Traffic Safety Administration, and the Coast Guard.[4] GAO reported that nominal costs ranged from $34,000 to $1.2 million per RIA, with an average cost of $212,000 (see Table 1). The office noted that its study did not include the costs of gathering data and that before 1981, agencies were required to focus primarily on costs rather than benefits in conducting RIAs.[5]

A GAO report issued in 1984 focused on EPA's implementation of President Reagan's Executive Order 12291, which required a regulatory impact analysis for every "major" federal rule.[6] (See Appendix A for more details of the order.) The report noted that a 1983 cost-benefit analysis of regulations setting air-quality standards cost $1.8 million in contractor expenses and 12.3 staff-years to complete—for a total of about $2.4 million in 1983 dollars.

A 1984 study by Paul Portney concluded that multimillion-dollar RIAs are the exception rather than the rule; he estimated the average cost of a regulatory impact analysis at $400,000 at that time. Portney defined the total costs of an RIA as including those for the agency personnel supervising the analysis, the OMB staff who

---

4. General Accounting Office, *Improved Quality, Adequate Resources, and Consistent Oversight Needed If Regulatory Analysis Is to Help Control Regulations*, GAO/PAD-83-6 (November 2, 1982).

5. Ibid., pp. 19-20.

6. General Accounting Office, *Cost-Benefit Analysis Can Be Useful in Assessing Environmental Regulations Despite Limitations*, GAO/RCED 84-62 (April 6, 1984), pp. 18-20.

TABLE 1. SELECTED STUDIES OF THE COSTS OF PREPARING REGULATORY ANALYSES

Study	Scope	Average Cost: Nominal Dollars	Average Cost: 1995 Dollars[a]
General Accounting Office (1982)[b]	38 RIAs by eight agencies	212,000	367,000
General Accounting Office (1984)[c]	1983 RIA by EPA on air-quality standards	2,394,176	4,019,000
Portney (1984)[d]	Approximate average cost of RIAs	400,000	657,000
Environmental Protection Agency (1987)[e]	15 RIAs by EPA, 1981-1986	675,000	1,102,000
General Accounting Office (1994)[f]	EPA's cost for Clean Air Act study to date	2,491,000	2,491,000
	Projected total cost	5,637,000	5,637,000
Congressional Budget Office (1997)	85 RIAs by six agencies, 1990-1996	570,000	570,000

SOURCE: Congressional Budget Office based on the studies below.

NOTE: RIAs = regulatory impact analyses; EPA = Environmental Protection Agency.

a. CBO converted contractors' costs to 1995 dollars by using the price indices for federal nondefense consumption of services; it converted agencies' personnel costs using the specific price index for federal nondefense consumption of services for compensation for general government employees except force-account construction.

b. General Accounting Office, *Improved Quality, Adequate Resources, and Consistent Oversight Needed If Regulatory Analysis Is to Help Control Regulations*, GAO/PAD-83-6 (November 2, 1982).

c. General Accounting Office, *Cost-Benefit Analysis Can Be Useful in Assessing Environmental Regulations Despite Limitations*, GAO/RCED 84-62 (April 6, 1984).

d. Paul R. Portney, "The Benefits and Costs of Regulatory Analysis," in V. Kerry Smith, ed., *Environmental Policy Under Reagan's Executive Order: The Role of Cost-Benefit Analysis* (Chapel Hill: University of North Carolina Press, 1984).

e. Environmental Protection Agency, *EPA's Use of Cost-Benefit Analysis, 1981-1986*, EPA-230-05-87-028 (August 1987).

f. General Accounting Office, *Air Pollution: EPA's Progress in Determining Costs and Benefits of Clean Air Act Legislation*, GAO/RCED-94-20 (February 1994).

reviews it, and any interagency groups needed to mediate disputes between OMB and other agencies.[7]

In a 1987 study, the Environmental Protection Agency examined 15 RIAs it had conducted between 1981 and 1986, 12 of which had cost data available.[8] The average cost of those analyses was approximately $675,000, although actual costs ranged from a low of $210,000 to a high of $2.3 million. EPA asserted that the total cost for those RIAs, about $10 million, was small compared with the regulatory improvements expected from the rules, which it estimated at $10 billion. (According to a recent Congressional Research Service report, that average cost of $675,000 in the mid-1980s would correspond to about $1 million in 1995 dollars.)[9]

In the most recent cost-related study, published in 1994, GAO evaluated EPA's efforts to determine the costs and benefits (both retrospective and prospective) of the entire set of rules under the Clean Air Act of 1990.[10] Although the act required EPA to complete its analysis by 1991, a draft was not available until mid-1996. GAO

---

7. Paul R. Portney, "The Benefits and Costs of Regulatory Analysis," in V. Kerry Smith, ed., *Environmental Policy Under Reagan's Executive Order: The Role of Cost-Benefit Analysis* (Chapel Hill: University of North Carolina Press, 1984), pp. 229-231.

8. Environmental Protection Agency, *EPA's Use of Cost-Benefit Analysis, 1981-1986*, EPA-230-05-87-028 (August 1987).

9. John L. Moore, *Cost-Benefit Analysis: Issues in Its Use in Regulation*, CRS Report for Congress 95-60 ENR (Congressional Research Service, June 28, 1995), p. 19. This report provides an excellent overview of the advantages and disadvantages of cost-benefit analysis.

10. General Accounting Office, *Air Pollution: EPA's Progress in Determining Costs and Benefits of Clean Air Act Legislation*, GAO/RCED-94-20 (February 1994), pp. 2-3.

estimated that as of December 1993, EPA had devoted $1.3 million in contractor costs and 12 full-time-equivalent staff-years, the equivalent of $2.5 million, to the retrospective part of the analysis. Total costs for both parts could reach $3.2 million in contractor costs plus 24 staff-years, the equivalent of $5.6 million.

In addition to the published studies described above, EPA has provided information on its cost-benefit analyses as part of the legislative development process. In response to a 1995 Congressional inquiry about the Regulatory Sunset and Review Act, the agency estimated that it devotes roughly $120 million a year to performing the risk assessments and cost-benefit analyses required by environmental statutes and administrative procedures.[11] Of that total, $55 million pays for the work of 690 EPA staff members, and the remaining $65 million goes for hiring contractors.

SCOPE AND METHODS OF CBO'S STUDY

The previous studies that attempted to gather cost data on specific RIAs are neither recent nor comprehensive. To help fill that gap, CBO examined the cost of 85 regulatory impact analyses, most of which were published from 1990 through 1996. The RIAs come from four agencies: the Environmental Protection Agency, the

11. Letter from the Environmental Protection Agency, Office of Policy, Planning and Evaluation, to Congressman Cardiss Collins, House Committee on Reform and Oversight, May 17, 1995.

National Highway Traffic Safety Administration (NHTSA), the Federal Aviation Administration (FAA), and the Coast Guard. CBO selected those agencies because their regulations are among those cited as having the largest impact on the U.S. economy.

The Environmental Protection Agency performed most of the RIAs in CBO's study: 65 of the total 85.[12] All of them came from three offices—the Office of Air and Radiation, the Office of Water, and the Office of Solid Waste—that have historically accounted for about 80 percent of the agency's RIAs.[13] The NHTSA and the Coast Guard each provided CBO with seven RIAs, and the FAA provided six. That sample represents most of the regulatory impact analyses the agencies published during the study period (with the exception of EPA's Office of Air and Radiation, which provided only the 25 analyses it had already researched for another study). A fifth agency, the Occupational Safety and Health Administration (OSHA), gave CBO a high, low, and average cost for analyzing the 21 rules it has issued since 1990, but it was unable to distinguish between RIAs and other analyses. Thus, OSHA's analyses are not included in the 85 RIAs that CBO examined, but its cost figures are presented for purposes of comparison.

12. That proportion of RIAs from EPA is consistent with what other studies used. For example, Hahn, "Regulatory Reform: What Do the Government's Numbers Tell Us?" evaluated 92 RIAs, 70 of them from EPA.

13. Environmental Protection Agency, Office of Policy, Planning, and Evaluation, "List of Cost-Benefit Documents Prepared by EPA Since the Mid 1970's" (June 1996).

In estimating average costs of the regulatory impact analyses, CBO included employee benefits and overhead and converted all costs (but the OSHA figures) to 1995 dollars (see Appendix C for more details). The results should be viewed as best estimates rather than precise figures because of the uncertainties inherent in estimating agency costs. CBO also calculated both average and median costs per RIA, because even though average figures are useful measures of the overall cost picture, they may not be representative of the majority of analyses if one or two are unusually expensive.[14] For example, although EPA's Office of Solid Waste had a relatively high average cost of $989,000 per RIA, its median cost was about $554,000, only 56 percent of the average.

CBO focused on RIAs published since 1990 for two reasons.[15] First, the procedures for calculating regulatory costs may have changed over time. CBO reviewed the most recent analyses to obtain the most current cost information possible. Second, RIAs can take five years (or longer) to complete, so it is important to allow sufficient time to capture the full duration of the RIAs from an adequate sample. All agencies gave CBO information on analyses dating from 1990 and later except the Federal Aviation Administration, which included cost information on RIAs

---

14. The median value is the cost below which half of the observations are found. Chapter II also reports the statistics when the four most expensive studies are excluded.

15. To determine the date of the RIA, CBO used the date of publication whenever possible. Otherwise, CBO used the last year in which resources were expended for the analysis. Delays sometimes occur between the completion of an RIA and its publication, depending on the rulemaking process of the agency.

published in 1988 and 1989. CBO included them in its study because they account for five of the six analyses for major rules issued recently by the FAA.

Most of the 85 RIAs that CBO examined were completed and published in concert with their associated rules—27 for proposed rules and 44 for final rules.[16] Another 10 were analyses in progress for either proposed or final rules. Of the remaining four RIAs, three were conducted for rules that were never proposed, and one evaluated the collective impact of a set of rules.

CBO did not distinguish between analyses conducted for proposed rules and final rules, for several reasons. First, agencies do not always record separate costs for analyzing the two types of rules. Second, economic analysis is cumulative: any analysis performed for the proposed rule will inform and guide analysis performed for the final rule, so the resulting continuum of work makes it difficult to attribute costs specifically to the draft or the final analysis. Third, a draft analysis does not necessarily cost more than a final analysis, or vice versa. If an agency receives many comments on a draft analysis, it may have to alter it substantially for the final proposal. If the agency receives few comments, it may not alter the draft very much.

16. A proposed rule is published in the *Federal Register* to allow a period of notice and comment. A final rule is also published in the *Federal Register* and may be different from the proposed rule, sometimes because of added analysis by the agency.